Marked Up Version Showing Changes

1. (Twice Amended)A smoking article including

a tobacco column;

a wrapper surrounding the tobacco column; and

a carbon monoxide pump including an adsorbent material for adsorbing carbon monoxide and subsequently releasing carbon monoxide or a reaction product thereof, thereby creating a flux during an inter-puff period from the adsorbent material separate from main stream combustion products, wherein the carbon monoxide pump is positioned proximate a smoker's mouthpiece end of the tobacco column with respect to the tobacco column so as to selectively divert carbon monoxide from main stream combustion products prior to inhaling by a smoker.

22. (Twice Amended)A smoking article including:

a tobacco column;

a wrapper surrounding the tobacco column;

a carbon monoxide pump proximate a smoker's mouthpiece end of the tobacco column including:

an adsorbent material for adsorbing carbon monoxide;

a catalyst for oxidizing carbon monoxide to carbon dioxide; and

venting holes adjacent to the adsorbent material,

wherein the carbon monoxide pump selectively diverts carbon monoxide from main stream combustion products, the catalyst at least partially oxidizes the carbon monoxide to carbon dioxide and the venting holes provide an alternative path for the diverted carbon monoxide and the oxidized carbon monoxide desorbed from the adsorbent material during an inter-puff period to check inhalation by a smoker.

46. (Twice Amended)A mouthpiece for a smoking article comprising:

a fitting to receive a smoking article, and

a carbon monoxide pump in the fitting including an adsorbent material for adsorbing carbon monoxide, wherein the carbon monoxide pump is positioned with respect to the smoking article so as to selectively divert carbon monoxide by desorption from the adsorbent material during an inter-puff period from main stream combustion products prior to inhaling by a smoker.

47. (Twice Amended)A mouthpiece for a smoking article comprising:

a fitting to receive a smoking article;

a carbon monoxide pump in the fitting including:

an adsorbent material for adsorbing carbon monoxide,

a catalyst for oxidizing carbon monoxide to carbon dioxide; and

venting holes adjacent to the adsorbent material,

wherein the carbon monoxide pump selectively diverts carbon monoxide from main stream combustion products by adsorption to and desorption from the adsorbent material, the catalyst at least partially oxidizes the carbon monoxide to carbon dioxide and the venting holes provide an alternative path for the diverted carbon monoxide and the oxidized carbon monoxide to check inhalation by a smoker.

Remarks

The Final Office Action mailed August 6, 2002 and the Advisory Action mailed October 24, 2002 have been carefully considered. After such consideration, Claims 1, 22, 46 and 47 have been amended. Claims 1-3, 22-40, 46 and 47 remain in the case with none of the claims yet being allowed.

The Final Office Action and Advisory Action reject Claims 1-3, 10-12, 24, and 40 under 35 U.S.C. 112, first paragraph. In rejecting Claims 1-3, 10-12, 24, and 40, the Final Office Action and Advisory Action state that the Claims contain subject matter which is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the specification was filed, had possession of the claimed invention. Specifically, the Final Office Action stated that "[t]he present disclosure does not support a flux from the adsorption material being separate from the mainstream combustion products." Further, the Office Action stated that "[a]t page 5 of the present disclosure, support is provided for the presence of a flux from the adsorption material but does not support said flux from the main stream combustion products." Applicants respectfully disagree.

The Examiner's attention is directed to the following passage:

> In an alternative embodiment, having no catalyst, the carbon monoxide pump 16 includes an adsorbent material. In this embodiment, as the main stream smoke passes over the adsorbent material, carbon monoxide is adsorbed from the main stream smoke onto the adsorbent material. During the delay between the current puff and the successive puff, which may be called an inter-puff period, the concentration of carbon monoxide increases in gas phase within the adsorbent material due to its desorption. The higher concentration of the carbon monoxide in the vicinity of the adsorbent material creates a driving force that increases the flux of carbon monoxide from the adsorbent material so that it exits holes 18 proximate to the carbon monoxide pump 16. [Emphasis Added.] Page 5, lines 5-14

At least this section of the specification shows that the flux from the adsorbing material is separate from the mainstream combustion products because the flux takes place during the inter-puff period when the combustion products are side stream smoke. Thus, the rejection of Claims 1-3, 10-12, 24, and 40 under 35 U.S.C. 112, first paragraph has been shown to be improper. The rejection having been shown to be improper should be withdrawn.

Also the Final Office Action and Advisory Action reject Claims 1-3, 22-30, 32-40, 46 and 47 under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,317,460 (Dale *et al.*) of record in view of US Patent No. 4,301,816 (Wahle *et al.*). Applicants traverse the rejection. Specifically, the rejection based on Dale *et al.* in view of Wahle *et al.* is improper because the short comings of Dale *et al.* are not remedied by combination with Wahle *et al.*

That is, Dale *et al.* and Wahle *et al.*, whether taken alone or in combination, neither discloses nor suggests a carbon monoxide pump including an adsorbent material for adsorbing carbon monoxide and subsequently releasing carbon monoxide or a reaction product thereof, thereby creating a flux from the adsorbent material separate from main stream combustion products, wherein the carbon monoxide pump is positioned proximate a smoker's mouthpiece end of the tobacco column with respect to the tobacco column so as to selectively divert carbon monoxide from main stream combustion products prior to inhaling by a smoker. Thus, Dale *et al.*, whether taken alone or in combination, neither discloses nor suggests a smoking article including a tobacco column, a wrapper surrounding the tobacco column and a carbon monoxide pump or a mouthpiece for a smoking article comprising a fitting to receive a smoking article and a carbon monoxide pump.

Dale *et al.* merely discloses catalysts for the low temperature oxidation of carbon monoxide to carbon dioxide, used in smoking product filters. The catalysts are carried upon a support which should be microporous. The catalysts may include mixtures of tin or tin compounds with other catalytic material. The catalysts may involve a Redox mechanism. The catalysts exhibit resistance to deactivation caused by contact with water.

Wahle *et al.* discloses filter cigarettes with multiplex filter mouthpieces wherein at least one filtering element constitutes an unwrapped filter plug having a reinforced porous peripheral layer produced in a machine, which is equipped with a perforating device for tubular envelopes connecting the mouthpieces to the respective plain cigarettes, or with a

device for making holes in the web of wrapping material which is subdivided into uniting bands. The holes are provided in those portions of tubular envelopes, which surrounds the reinforced porous peripheral layers. Filtering elements, which constitute unwrapped filter plugs may be disposed at the free ends of the mouthpieces or adjacent to the plain cigarettes.

The Final Office Action and Advisory Action provide no evidence that one of ordinary skill in the art would have seen a motivation to combine Dale and Wahle to achieve Applicant's claimed invention, as must be done under the Administrative Procedures Act to justify rejection of the claims. *In re Lee*, 61 USPQ 2d 1430 (Fed. Cir. 2002). The 35 U.S.C. 35 U.S.C. 103(a) rejection, being improper, should thus be withdrawn.

Applicants have placed the case in condition for immediate allowance and such action directed to Claims 1-3, 22-40, 46 and 47 is respectfully requested. However, if any issue remains unresolved, Applicant's attorney would welcome the opportunity for a telephone interview to expedite allowance and issue.

Respectfully submitted,

Stanislav Antolin
Registration No. 34,979
MacCord Mason PLLC
P. O. Box 2974
Greensboro, NC 27402
(336) 273-4422

Date: November 6, 2002
File No.: 4800-090